NEW

DIGITAL MINILAB
Frontier
340

Superlative image quality and improved speed in a compact minilab.

High speed, High capacity, Small size, Outstanding quality – thanks to new faster processing technology.

The Digital Minilab Frontier series has won worldwide acclaim for the incomparable true-digital print quality produced by a revolutionary CCD scanner and Fujifilm's proprietary, state-of-the-art laser exposure system. The newest Frontier 340 model represents a major technological breakthrough, achieving an outstandingly high production speed of 900 prints/hr at 3R size or 800 prints/hr at 4R size, which has never before been attained with a machine of this size, thanks to a newly developed, faster-processing chemical system.

The Frontier 340 performs its magic in a remarkably small space: with a footprint of just 1.2 square meters (13 sq. ft.), you can place one in a small kiosk or in a corner of a larger store, offering quick, onsite processing service wherever your customers are. And in spite of its many advanced features, the Frontier is easier than ever for the operator, with an improved icon-based user interface and a larger operations screen. With the Frontier 340 your customers can enjoy all the extraordinary benefits that the new digital era has to offer.

Top quality from a compact p

High speed, High capacity, Small size

With its space-saving configuration the Frontier 340 is designed to fit into the tightest corners, freeing up valuable retail space for other uses and providing on-site print processing capabilities just about anywhere. And thanks to its new chemical processing technology it delivers substantially improved speed and performance matching that of much bigger machines.

Dry-to-Dry time
1'40s

1.2m²
(13ft²)

Processing capacity

3R size print	4R size print
Approx. **900** prints/h	Approx. **800** prints/h

Advanced Digital Technology and Outstanding Print Quality

Fujifilm is a pioneer in digital image-processing technology, including sophisticated laser exposure system – with innovations at every step. The results can be seen in the extraordinarily high print quality of the Frontier's output. And superior print quality means fewer rejects and more satisfied customers.

Simple Operation

With its improved, icon-based user interface and its larger operations screen, the Frontier 340 is easier than ever to use. Standard operations are automated as fully as possible to reduce the potential for error, and maintenance routines are designed to be as clean and straightforward as possible.

Expandability

While it's vital to meet the demands of your current customers, it's also important to keep an eye to the future. The Frontier 340 is flexible enough to address both present and future needs, letting you offer your customers a full range of special services. These include production of ID photos, calendars, and many other special print formats as well as reading and writing capabilities covering a variety of digital media.
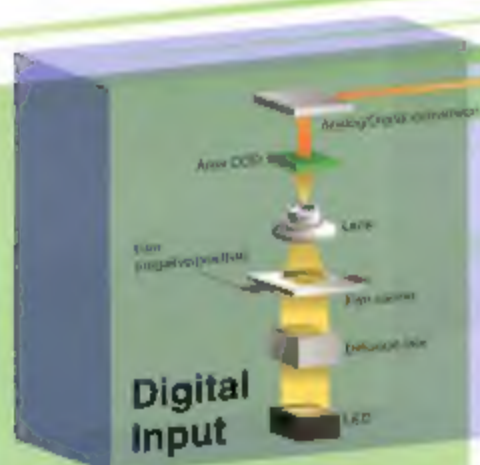
DIGITAL MINILAB
Frontier 340

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Technical advancements that make a visible difference.

Innovative digital imaging technology is the basis for the Frontier's excellent reputation throughout the world. From the area CCD to the solid-state laser exposure system, each innovation has been developed with the goal of providing reliable, optimal image reproduction.

In between digital input and output, the Frontier incorporates an impressive suite of image-processing software designed to make each and every photo come out as close to perfect as possible. The result of all this digital magic is quite clear – better prints, fewer rejects, and happier customers.
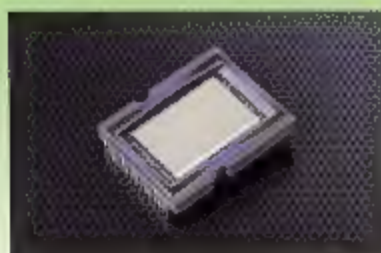
Image Intelligence

"Image Intelligence" is a set of sophisticated digital image-processing software technologies incorporated in the Frontier series. The software includes a "Scene Analysis Algorithm" that analyzes and diagnoses the captured scene, and an "Image Expression Algorithm" that introduces optimal corrections to the analyzed scene.

FUJIFILM SLP1000SE

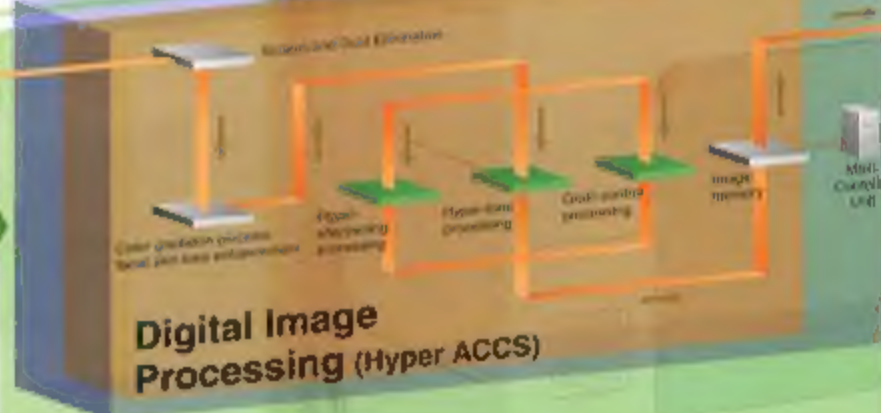## Digital Input

Digital Image Processing (Hyper ACCS)

The innovative area CCD

The Frontier 340's scanning unit is an innovative device called the area CCD which delivers excellent performance in spite of its small size – ultra-high resolution, superior S/N ratio, and high scanning speed.

High-speed area CCD

High-speed digital image processing

Image data is exposed to a sophisticated array of image-enhancement software designed to optimize final print quality and compensate for less-than-ideal photographic conditions.
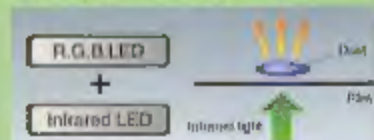
Scratch and Dust Elimination Feature

Uses infrared light to pinpoint any dust or scratches that may be on the film surface, and automatically corrects the image by extrapolating image data from the surrounding area.

Other features include:
- Hyper-tone processing (for high-contrast and overly backlit scenes)
- Automatic sharpness adjustment
- Grain control processing

Scratch and Dust Elimination

R.G.B.LED
+
Infrared LED

Grain Control Processing

Digital Output

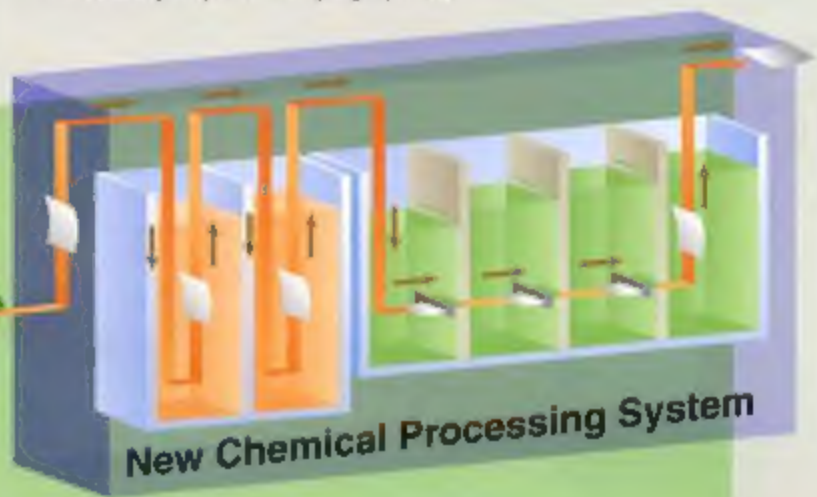## An exclusive laser exposure system

The laser exposure system makes a visible difference in print quality, with exceptionally sharp, high-resolution images resulting from the laser's tight beam and narrow wavelength characteristics.
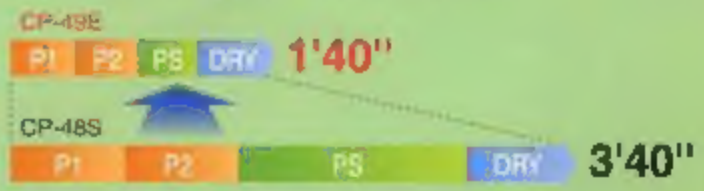
Solid-state laser

High-speed processing with a new chemical system (CP-49E), for time-saving efficiency.

The Frontier 340's new chemical system CP-49E represents a dramatic improvement in speed and throughput, while also saving space. Refinements and new innovations include a submerged wiper-blade component that cleanses chemicals from the color print paper much more efficiently; a multi-roller paper transport system, for faster speed and more effective cleaning; higher-temperature processing, for faster chemical reactions; and an improved drying unit, for substantially improved drying speed.

New Chemical Processing System

Improved initial-print dry-to-dry time

CP-49E

| P1 | P2 | PS | DRY | **1'40"** |

CP-48S

| P1 | P2 | PS | DRY | **3'40"** |

Total processing has been reduced from 3 min. 40 sec. to 1 min. 40 sec. for initial-print dry-to-dry time.

One-touch chemical

One-touch chemical mixing, for simple, clean and safe processing.

Fujicolor Crystal Archive Paper TYPE ONE

Recommended as the optimum color print paper for Frontier Minilab systems, with superior color gradation and image stability.

Fujicolor Crystal Archive

Paper

TYPE ONE

Simple Operation

A new operations interface that's easier than ever.

Improving on an already easy-to-use system, the Frontier 340 introduces a new, more intuitive user interface based on large, descriptive icons with text rather than abbreviated pull-down menus. Operational steps and options are clearly laid out onscreen and can be quickly selected. The Frontier also introduces a larger display screen – 17 inches in size – to make screen operations even more user-friendly.
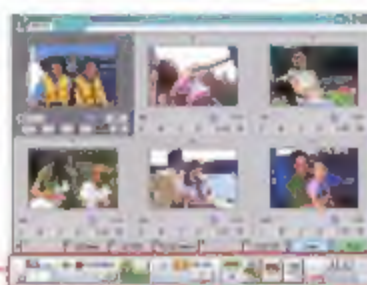
Simple user interface

Day-to-day production and regular maintenance operations are all accessible via a simple graphic user interface, so even inexperienced operators can soon master their jobs without extensive training. There's also a detailed onscreen help system that provides step-by-step explanations and instructions for all these operations.
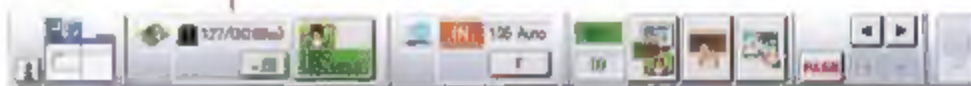

Production sequences are instantly accessible through onscreen icons.

The onscreen help system provides step-by-step explanations and instructions for daily usage and maintenance.

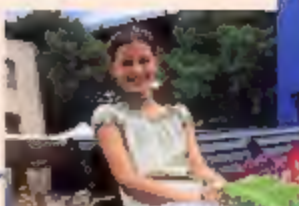Operational choices are clear and intuitive.

Single-scan digitization

Now film only needs to be scanned once, as image data from the film is digitized at the same time as regular prints are produced. Thus, operations like creating a FUJICOLOR CD or storing image data for later use no longer require an extra scanning step.

Prints

Digital media

Frontier 340

Imaging Controller

FUJICOLOR CD

Flexible-use film carrier

Film loading is easier thanks to a Dual-format Interchangeable Film Carrier that accommodates both Advanced Photo System film and 135 film, allowing automatic "one-pass" processing.

Dual-format Interchangeable
Film Carrier NC100AC

Auto calibration

The Automatic Calibrator, located on top of the Frontier 340, simplifies daily maintenance by automatically adjusting color and tone reproduction to a specified standard, for print quality that's consistent from one day to the next.

Perfect one-channel print system

The "perfect one-channel print system" automatically detects the size and type of film, controlling all processing while eliminating the need for time-consuming manual selection and adjustment on the part of the operator. Different film types (negatives, monochrome film, reversal film, and even digital camera prints) are all handled together, so there's no need to separate different kinds of film.

Cross-over rack auto cleaning

The Frontier 340 performs cross-over rack cleaning automatically each time the unit is turned off. As a result, the regular maintenance task of cleaning and drying the cross-over racks manually has been reduced from once a day (in conventional lab systems) to only once a week*.

*Some racks excluded.

High-quality Prints

Scratch and dust elimination to clean up flawed film

Marks caused by scratches and dust on the original negative are especially noticeable in extra-large-size reprints, but the Frontier 340 automatically corrects these flaws using an exclusive correction technology. The result is a natural-looking final image, which translates into better customer satisfaction.

Standard image-correction features

Sophisticated image-correction technology is built into the Frontier 340 system as a standard.

Backlight correction
Image density adjustment if performed independently for foreground and background areas, so the Frontier is able to automatically compensate for strongly backlit scenes.

Sharpness adjustment
Fujifilm's proprietary HyperSharpness process enhances the edge definition of objects, colors and shadows while compensating for film grain.
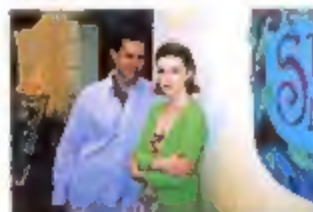
High-contrast correction
This compensates for problems in flash shots where the foreground figures can appear too light and washed out while the background is dark and murky.
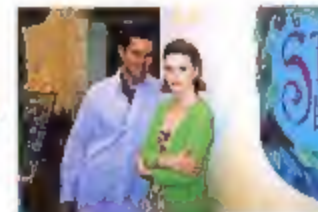
Over- / under-exposure compensation
When an underexposed or an overexposed negative is detected, the density and contrast of the image can be adjusted automatically.

Backlight correction

Sharpness adjustment
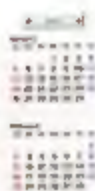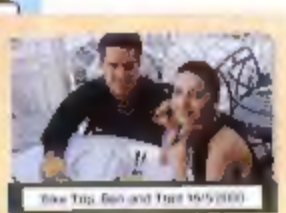
High-contrast correction

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Variety Print Service

Special print formats available for both conventional film and digital cameras

Prints with Text

Custom text can be printed in text boxes of various designs. The text box position can be adjusted, and a choice of print fonts and colors is available.

(USB full keyboard is required for Prints with Text.)

Calendar Prints

Turn any photographic image into an attractive calendar, choosing from among numerous different styles and sizes.

A full selection of print formats and sizes

C format

H format

B" x 12" prints

Advanced Photo System
index prints (IX240)

135 index prints

P format

Handy index prints - with thumbnail copies of every frame on a roll of film - are produced automatically when a roll of film is processed, and they can also be custom-ordered. Standard-size prints in different formats and regular enlargement prints in a range of sizes are also available.

Red-eye compensation

Red-eye compensation
The appearance of red eyes due to a bright flash can be corrected automatically after mouse selection with this function. Manual retouching is also possible.

Soft-focus

Soft-focus
The soft-focus function softens the overall tone of a photographic image. It can be an effective method for creating elegant portrait shots.

Cross-filter

Cross-filter
This feature places a 45-degree cross of light on any point on the photo to create a subtly dramatic effect. Light crosses can be added and removed manually.

Free cropping
This feature lets you take any selected area of a photo and use it to fill the entire frame; the area can also be rotated at the time of selection.

Lens distortion correction*
The Frontier's image processor is designed to detect less-than-ideal lens conditions and compensate automatically, by brightening the darker corner areas and correcting distortion around the photo's edges.

Free cropping

* This service is not available for digital images.

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Greeting Card Prints

These are custom greeting cards made from a single shot. You can choose the artwork that goes with each shot.

Frame Prints

This template takes a single image and places it within an attractive ornamental frame. Various frame designs are available to choose from.

Album Prints

Multiple shots of the same size can be arranged on a single large sheet to create an album-like effect. Frames may be freely chosen from more than one roll of film (or even from digital media), and various background designs are available.

Card Prints

With this template, ten prints of a single frame (in card size) are arranged on an A4-size sheet.

Cut out the cards

Large Index Prints*

Larger-than-standard-size index prints of the frames on negative film can be printed on a large sheet (8" x 10" or A4-size), with frame numbers printed under each frame.

This service is not available for digital images.

Memory Copy Prints

Additional text can be added freely to a set area at the bottom of a frame, to commemorate a special occasion. The size, color, and font of the text can be specified.

Woodland trip 29/7/2003

Other attractive variations

- Package prints
- Auto-rotate frame prints*
- File prints
- Dark frame prints
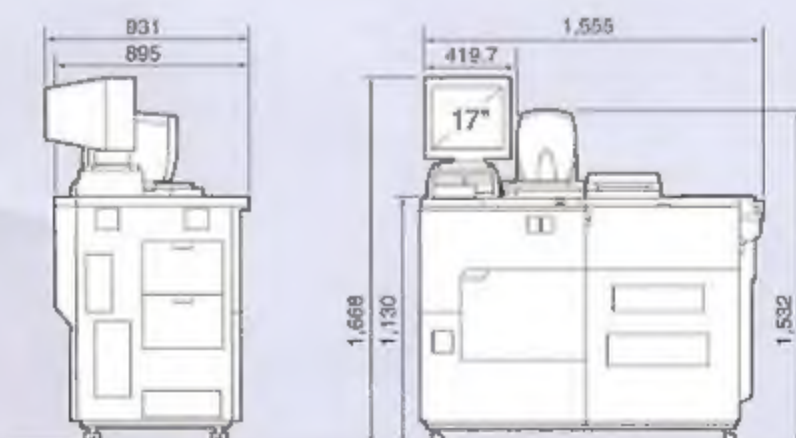- Business-card prints
- CPH auto-changed frame prints*
- CPH rotate frame prints*
- ID photos

These services are not available for digital images.

Fujifilm Digital Minilab Frontier 340 Specifications

Type: Floor-type, normal-light operation (input, laser printer, processor, cutter, sorter in one unit).

Scanning section: Area CCD.

Film carriers:
- Dual-format Interchangeable Film Auto Carrier (accepts 135F/H/P/Hv color negatives or Advanced Photo System (IX240)).
- Manual carrier.

Image processing: Optimal color reproduction processing, color gradation control, hyper-sharpness processing, hyper-tone processing, soft focus, facial expression enhancement, monotone finishing, red-eye correction processing, a variety of compositions (e.g. calendar prints, greeting cards, multi-prints) and others.

Display: 17-inch CRT color display.

Input light source: LED.

Printable films and sizes: 110, 126, 135F/H/P/Hv/full-panorama, *(using standard or optional film carriers)* Advanced Photo System (IX240), 120, 220.

Acceptable digital media: Prints from ZIP™ disk, CD-R, MO disk, FD, FUJICOLOR CD, Digital cameras (selected format), SmartMedia™, xD-Picture card, PC card, CompactFlash™, SD Card, Memory stick.

Exposure system: Scanning exposure system using RGB lasers (solid-state G and B lasers).

Print sizes: 89 x 89 mm – 203 x 305 mm, A4.

Paper: FUJICOLOR paper (Crystal Archive Paper Type ONE).

Paper magazines: Single paper magazine (standard accessory).

Expansion capability: 100-base Ether (connectivity to internal PC or from external PC for FDI) port, USB ports, and RS232C port.

Processing capacity: *(actual production)*
135: 3R/127 x 89 mm: Approx. 900 prints/hr. (using 127 mm width paper)
4R/152 x 102 mm: Approx. 800 prints/hr. (using 152 mm width paper)
Advanced Photo System (IX240):
21 rolls/hr. (3R C/H/P mixed-format; 25 exp. roll and index print);
18 rolls/hr. (4R C/H/P-mixed-format prints; 25 exp. roll and index print),
(using 89mm (for 3R) and 102mm (for 4R) width paper)
203 x 305mm: Approx. 220 prints/hr.

Print to print: Available with optional software.

Processing time: Dry to dry: 1 min. 40 sec.

Processing chemicals: Chemical system CP-49E.

Power requirements: AC200-240V (50/60Hz) 4.8KVA.

Dimensions: 1,555 (W) x 931 (D) x 1,668 (H) mm.

Weight: Approx. 500kg (550kg during actual operation).

Installation space: Approx. 1.2 m².

Dimensions

Units: mm

931
895
1,555
419.7
17"
1,668
1,130
1,532

(UL) c(UL) CE The Frontier 340 receives the UL/CUL/CE Marks for meeting high safety standards.

FUJIFILM

FUJI PHOTO FILM CO., LTD.
26-30, NISHIAZABU 2-CHOME, MINATO-KU, TOKYO 106-8620, JAPAN